

UNIQUE IDENTIFICATION (UID)



Unique Identification (UID) of Items

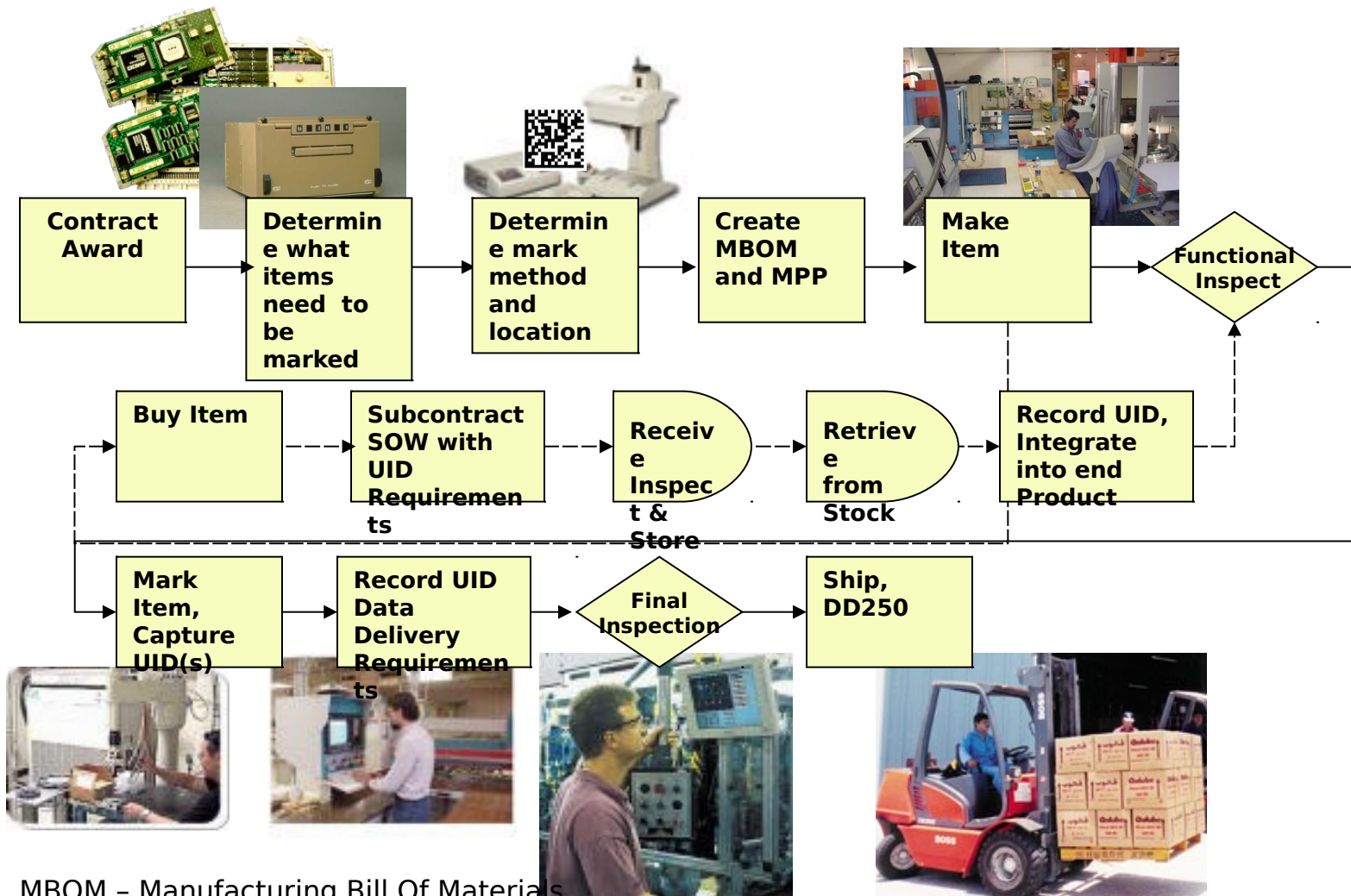
-Slides from Brief to SEA 04X, 23 April 04 -

"Unique identification is the ability to physically distinguish one item from another...We view a unique identifier as a set of data for assets that:

- is globally unique and unambiguous*
- ensures data integrity and data quality throughout life*
- supports multi faceted business applications and users"*



UID Vendor (NSY) Perspective



MBOM – Manufacturing Bill Of Materials
MPP – Manufacturing Process Planning



UID Impact on Naval Shipyards

- ◆ Primary areas of UID impact for Naval Shipyards
 - **Supply System / Material Management systems / processes (04L)**
 - Shop Floor industrial process and equipment (04X)
 - **Property Identification / Management (04X)**
 - **IT/ADP systems and technologies (04X / 04L)**
 - MAT, AIM, MRQT, FEM software and hardware
 - FEM software and hardware
 - AIT / ADC reading and marking technologies
- ◆ Categories of items - Manufactured / Existing
 - Ship components and systems
 - Ship Depot Maintenance Availability
 - Ship Component Depot Repairable
 - Shipyard facilities / plant equipment / temporary systems



UID Implementation Challenges

◆ Depot Actions that Could Involve UID:

- Receiving
- Disassembly
- Assembly
- Shipping
- Manufacturing (from raw stock)
- Remanufacturing
- Modification
- Scrap

◆ Key Issue: Data Integrity

DoD Guide: Functional process

- Fund
- Acquire
- Produce & Accept
- Transport
- Stock
- Order
- Supply
- Use
- Repair
- Rebuild
- Decommission
- Dispose
- Pay
- Account

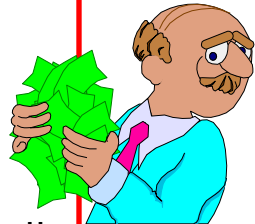


UID Implementation Challenges

- ◆ Specify which parts need UID
- ◆ Specify where on a part to apply UID symbol
- ◆ Specify how big to make the UID symbol
- ◆ Specify the UID construct for an enterprise doing marking
- ◆ Specify the marking technology to use for each part
- ◆ Revise drawings for all affected items
- ◆ Specify when and how UID data is to be used
- ◆ Specify what data is to be collected along with UID
- ◆ Determine if ~~existing databases or information systems need to be~~ modified or new ones need to be developed to accommodate UID data
- ◆ Select and procure marking and reading equipment
- ◆ Train personnel
- ◆ Develop marking, reading, and data entry procedures or modify existing procedures to accommodate UID data collection
- ◆ Prior to marking, generate the specific UID character string for a part
- ◆ Apply UID marks to outgoing items
- ◆ Read UID marks on incoming items
- ◆ Enter UID data into information systems
- ◆ Life cycle and system management, execution, and maintenance for all the above

Depot
responsibilities

(and costs)





Assumptions & Issues

- ◆ Assumption: UID is N/A to vast majority of NSY *manufactured* items (I.e., prefab items do meet scope and intent of UID)
- ◆ NSYs may be prime site for “Opportunity-Based Item Application” on existing shipboard and supply system repairable items
- ◆ NSY application of UID predicated on:
 - Customer invoking and funding in work package
 - Engineering specifications and direction



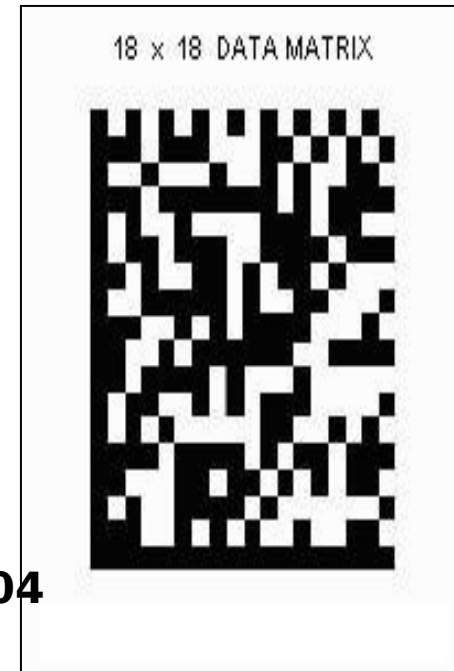
Assumptions & Issues

- ◆ Lack of BIG Navy Policy
- ◆ DoD policy, business case, business rules, and migration plan requirements still evolving
- ◆ Lack of funding / budget, unresolved technology issues, regulatory and security compliance requirements, need documented cost-benefit analysis and ROI
 - Similar/equal to Navy input to draft RFID Policy 29 Jan 04
- ◆ NMCI and NEMAIS/Converged ERP alignment must be addressed



UID Implementation Assessment Study: UID at DoN Depots & Shipyards

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Focus: Shop Floor industrial process and equipment



Project Overview

Sites Covered by Study:

- NAVSEA
 - Norfolk NSY
 - Portsmouth NSY
 - Pearl Harbor NSY & IMF
 - Puget Sound NSY & IMF
 - NUWC Keyport (depot)
 - NSWC Crane (depot)
- NAVAIR
 - NADEP Cherry Point
 - NADEP Jacksonville
 - NADEP North Island
- USMC
 - MCLB Albany
 - MCLB Barstow

Sites to be visited

Visit to NNSY & NSSG
27-28 April 04



Project Overview

- ◆ Objective: Perform a quick assessment of the time and resources required to implement UID at depots and shipyards
- ◆ Duration: 3 months (March 1, 2004 – May 31, 2004)
- ◆ Deliverables:
 - Recommended UID implementation steps
 - Estimated costs of UID implementation
 - Timeline for UID implementation
 - Identification of any issues outside the depots' control that would affect their UID implementation plan

Focus: Shop Floor industrial process and equipment



Project Overview

Approach:

- Conduct the study at 4 “representative” depots (Norfolk NSY, NUWC Keyport, NADEP Cherry Point, MCLB Barstow); extend results to rest of depots
- Pick 5-10 “representative” parts/assemblies at each depot, based on shape, size, material, rework process; extend results to rest of parts
- Tasks: Visit specified depots, select candidate parts, collect data (workload, processing), specify UID marking/reading equipment, determine how and where to read/apply marks on shop floor, specify UID implementation steps, estimate costs (labor, equipment, material, training)

Focus: Shop Floor industrial process and equipment



Where are we going?

- ◆ Our implementation plan timeline, costs, and actions will continue to evolve around all the initiatives and issues outlined above, including but not limited to the Penn State study.....
 - Continue to work with NAVAIR, Marine Corps, and N4
 - Penn State visit to NNSY / NSSG 27-28 April
 - Meeting for Shipyard AIDC Insertion on 28 April 2004
 - Naval Shipyard UID Project Team teleconference 30 April
 - OSD Depot Maintenance UID IPT meeting 19-20 May at Huntsville, Alabama
- ◆ SEA 04L communication with PEOs, Fleet, NAVSUP, SEA 05, NMCI, and NEMAIS
- ◆ Recommendation: *You raise UID for discussion at SEA 04 Staff Meeting*



Our Team



- ◆ **NAVSEA HQ:**
 - Jane Zimmerman, SEA 04L514, Automatic Identification Technology (AIT) Project Lead and NAVSEA member of NAVY AIT Steering Group
 - CDR Tom Simcik, SEA 04L44, Shipyard Material Branch (and Mark Westin, Logistics Support Inc.)
 - Kurt Doehnert, SEA 04X2E, NSY Management Group / RepTech Working Group Principal
 - Stu Mahaffey, SEA 04XC, Information Technology Division
- ◆ **OPNAV**
 - Fred Bourassa, CNO-OPNAV-N43 (Shipyards)
 - CDR Steve MacDonald, Supply Operations & Policy, OPNAV N413T
- ◆ **Norfolk Naval Shipyard** (lead pilot shipyard)
 - Mike Zydron, Code 220, Process Controls Division
 - Mike Fransen, Code 249
 - CDR John McKone, Code 500, FISC Supply Officer
 - Horace Pratt, Code 918, RepTech p.o.c
- ◆ **Navy Systems Support Group** (NSSG)
 - Jeff Shaffer, NSSG, MAT System
- ◆ **Management Systems Support Division** (MSSD)
 - Ed Lamarine, Code 1254, Material Management
 - Ralph Gero, Code 1254, NSY Automated Data Collection Standards Group
- ◆ **NUWC Keyport**
 - Seanda Williams, Dept 321
- ◆ **Penn State Applied Research Lab** (ARL):
 - Rick Tillotson, UID Project Lead
 - Sean Krieger, ARL REPTECH Manager
- ◆ **Portsmouth, Puget Sound and Pearl Harbor NSYs** - Corporate Material PAT, and Technology p.o.c.

DoD Guide Functional Stakeholders/PL
• Engineering Management
• Acquisition Management
• Property, Plant and Equipment Account
• Logistics Management and Accounta
• Financial Management